

$f_2(1270)$ $I^G(J^{PC}) = 0^+(2^{++})$ **$f_2(1270)$ MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	
1275.1 ± 1.2 OUR AVERAGE		Error includes scale factor of 1.1.			
1262	± 1	± 8	ABLIKIM 06v	$e^+ e^- \rightarrow J/\psi \rightarrow \gamma \pi^+ \pi^-$	
1275	± 15		ABLIKIM 05	$J/\psi \rightarrow \phi \pi^+ \pi^-$	
1283	± 5		ALDE 98	$100 \pi^- p \rightarrow \pi^0 \pi^0 n$	
1278	± 5		¹ BERTIN 97c	$0.0 \bar{p} p \rightarrow \pi^+ \pi^- \pi^0$	
1272	± 8	200k	PROKOSHKIN 94	$38 \pi^- p \rightarrow \pi^0 \pi^0 n$	
1269.7	± 5.2	5730	AUGUSTIN 89	$e^+ e^- \rightarrow 5\pi$	
1283	± 8	400	² ALDE 87	$100 \pi^- p \rightarrow 4\pi^0 n$	
1274	± 5		² AUGUSTIN 87	$J/\psi \rightarrow \gamma \pi^+ \pi^-$	
1283	± 6		³ LONGACRE 86	$22 \pi^- p \rightarrow n 2 K_S^0$	
1276	± 7		COURAU 84	$e^+ e^- \rightarrow e^+ e^- \pi^+ \pi^-$	
1273.3	± 2.3		⁴ CHABAUD 83	$17 \pi^- p$ polarized	
1280	± 4		⁵ CASON 82	$8 \pi^+ p \rightarrow \Delta^{++} \pi^0 \pi^0$	
1281	± 7	11600	GIDAL 81	J/ψ decay	
1282	± 5		⁶ CORDEN 79	$12\text{--}15 \pi^- p \rightarrow n 2 \pi$	
1269	± 4	10k	APEL 75	$40 \pi^- p \rightarrow n 2 \pi^0$	
1272	± 4	4600	ENGLER 74	$6 \pi^+ n \rightarrow \pi^+ \pi^- p$	
1277	± 4	5300	FLATTE 71	HBC $7.0 \pi^+ p$	
1273	± 8		² STUNTEBECK 70	$8 \pi^- p, 5.4 \pi^+ d$	
1265	± 8		BOESEBECK 68	HBC $8 \pi^+ p$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1277	± 6	870	⁷ SCHEGELSKY 06A	$\gamma \gamma \rightarrow K_S^0 K_S^0$	
1251	± 10		TIKHOMIROV 03	$40.0 \pi^- C \rightarrow K_S^0 K_S^0 K_L^0 X$	
1260	± 10		⁸ ALDE 97	$450 pp \rightarrow pp \pi^0 \pi^0$	
1278	± 6		⁸ GRYGOREV 96	$40 \pi^- N \rightarrow K_S^0 K_S^0 X$	
1262	± 11		AGUILAR-...	EHS $400 pp$	
1275	± 10		AKER 91	$CBAR$ $0.0 \bar{p} p \rightarrow 3\pi^0$	
1220	± 10		BREAKSTONE 90	$pp \rightarrow pp \pi^+ \pi^-$	
1288	± 12		ABACHI 86B	$e^+ e^- \rightarrow \pi^+ \pi^- X$	
1284	± 30	3k	BINON 83	$38 \pi^- p \rightarrow n 2 \eta$	
1280	± 20	3k	APEL 82	$25 \pi^- p \rightarrow n 2 \pi^0$	
1284	± 10	16000	DEUTSCH...	HBC $16 \pi^+ p$	
1258	± 10	600	TAKAHASHI 72	$8 \pi^- p \rightarrow n 2 \pi$	
1275	± 13		ARMENISE 70	$9 \pi^+ n \rightarrow p \pi^+ \pi^-$	
1261	± 5	1960	² ARMENISE 68	$5.1 \pi^+ n \rightarrow p \pi^+ MM^-$	
1270	± 10	360	² ARMENISE 68	$5.1 \pi^+ n \rightarrow p \pi^0 MM$	
1268	± 6		⁹ JOHNSON 68	HBC $3.7\text{--}4.2 \pi^- p$	

¹ T-matrix pole.² Mass errors enlarged by us to Γ/\sqrt{N} ; see the note with the $K^*(892)$ mass.³ From a partial-wave analysis of data using a K-matrix formalism with 5 poles.⁴ From an energy-independent partial-wave analysis.⁵ From an amplitude analysis of the reaction $\pi^+ \pi^- \rightarrow 2\pi^0$.⁶ From an amplitude analysis of $\pi^+ \pi^- \rightarrow \pi^+ \pi^-$ scattering data.⁷ From analysis of L3 data at 91 and 183–209 GeV.⁸ Systematic uncertainties not estimated.⁹ JOHNSON 68 includes BONDAR 63, LEE 64, DERADO 65, EISNER 67.

$f_2(1270)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
185.0^{+ 2.9}_{- 2.4} OUR FIT				Error includes scale factor of 1.5.
184.2^{+ 3.7}_{- 2.4} OUR AVERAGE				Error includes scale factor of 1.5. See the ideogram below.
175 \pm 6 \pm 4	\pm 10	ABLIKIM	06v BES2	$e^+ e^- \rightarrow J/\psi \rightarrow \gamma \pi^+ \pi^-$
190 \pm 20		ABLIKIM	05 BES2	$J/\psi \rightarrow \phi \pi^+ \pi^-$
171 \pm 10		ALDE	98 GAM4	$100 \pi^- p \rightarrow \pi^0 \pi^0 n$
204 \pm 20		¹⁰ BERTIN	97c OBLX	$0.0 \bar{p} p \rightarrow \pi^+ \pi^- \pi^0$
192 \pm 5	200k	PROKOSHKIN	94 GAM2	$38 \pi^- p \rightarrow \pi^0 \pi^0 n$
180 \pm 24		AGUILAR....	91 EHS	$400 p p$
169 \pm 9	5730	¹¹ AUGUSTIN	89 DM2	$e^+ e^- \rightarrow 5\pi$
150 \pm 30	400	¹¹ ALDE	87 GAM4	$100 \pi^- p \rightarrow 4\pi^0 n$
186 \pm 9 \pm 2		¹² LONGACRE	86 MPS	$22 \pi^- p \rightarrow n 2K_S^0$
179.2 ^{+ 6.9} _{- 6.6}		¹³ CHABAUD	83 ASPK	$17 \pi^- p$ polarized
160 \pm 11		DENNEY	83 LASS	$10 \pi^+ N$
196 \pm 10	3k	APEL	82 CNTR	$25 \pi^- p \rightarrow n 2\pi^0$
152 \pm 9		¹⁴ CASON	82 STRC	$8 \pi^+ p \rightarrow \Delta^{++} \pi^0 \pi^0$
186 \pm 27	11600	GIDAL	81 MRK2	J/ψ decay
216 \pm 13		¹⁵ CORDEN	79 OMEG	$12\text{--}15 \pi^- p \rightarrow n 2\pi$
190 \pm 10	10k	APEL	75 NICE	$40 \pi^- p \rightarrow n 2\pi^0$
192 \pm 16	4600	ENGLER	74 DBC	$6 \pi^+ n \rightarrow \pi^+ \pi^- p$
183 \pm 15	5300	FLATTE	71 HBC	$7 \pi^+ p \rightarrow \Delta^{++} f_2$
196 \pm 30		¹¹ STUNTEBECK	70 HBC	$8 \pi^- p, 5.4 \pi^+ d$
216 \pm 20	1960	¹¹ ARMENISE	68 DBC	$5.1 \pi^+ n \rightarrow p \pi^+ \text{MM}^-$
128 \pm 27		¹¹ BOESEBECK	68 HBC	$8 \pi^+ p$
176 \pm 21		^{11,16} JOHNSON	68 HBC	$3.7\text{--}4.2 \pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
195 \pm 15	870	¹⁷ SCHEGELSKY	06A RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
121 \pm 26		TIKHOMIROV	03 SPEC	$40.0 \pi^- C \rightarrow K_S^0 K_S^0 K_L^0 X$
187 \pm 20		¹⁸ ALDE	97 GAM2	$450 p p \rightarrow p p \pi^0 \pi^0$
184 \pm 10		¹⁸ GRYGOREV	96 SPEC	$40 \pi^- N \rightarrow K_S^0 K_S^0 X$
200 \pm 10		AKER	91 CBAR	$0.0 \bar{p} p \rightarrow 3\pi^0$

240	± 40	3k	BINON	83	GAM2	38	$\pi^- p \rightarrow n 2\eta$
187	± 30	650	¹¹ ANTIPOV	77	CIBS	25	$\pi^- p \rightarrow p 3\pi$
225	± 38	16000	DEUTSCH...	76	HBC	16	$\pi^+ p$
166	± 28	600	¹¹ TAKAHASHI	72	HBC	8	$\pi^- p \rightarrow n 2\pi$
173	± 53		¹¹ ARMENISE	70	HBC	9	$\pi^+ n \rightarrow p \pi^+ \pi^-$

¹⁰ T-matrix pole.

¹¹ Width errors enlarged by us to $4\Gamma/\sqrt{N}$; see the note with the $K^*(892)$ mass.

¹² From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

¹³ From an energy-independent partial-wave analysis.

¹⁴ From an amplitude analysis of the reaction $\pi^+ \pi^- \rightarrow 2\pi^0$.

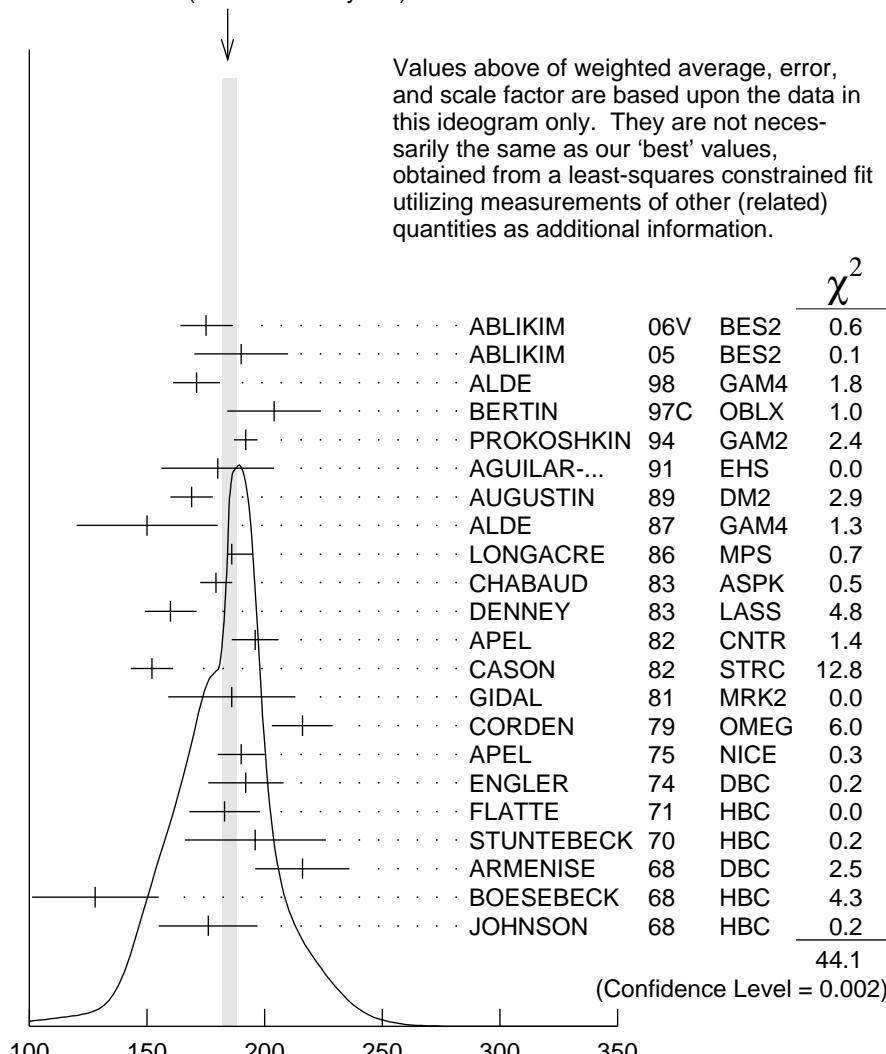
¹⁵ From an amplitude analysis of $\pi^+ \pi^- \rightarrow \pi^+ \pi^-$ scattering data.

¹⁶ JOHNSON 68 includes BONDAR 63, LEE 64, DERADO 65, EISNER 67.

¹⁷ From analysis of L3 data at 91 and 183–209 GeV.

¹⁸ Systematic uncertainties not estimated.

WEIGHTED AVERAGE 184.2+3.7-2.4 (Error scaled by 1.5)



$f_2(1270)$ width (MeV)

$f_2(1270)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)	Scale factor/ Confidence level
$\Gamma_1 \pi\pi$	(84.8 $^{+2.4}_{-1.2}$) %	S=1.2
$\Gamma_2 \pi^+\pi^-2\pi^0$	(7.1 $^{+1.4}_{-2.7}$) %	S=1.3
$\Gamma_3 K\bar{K}$	(4.6 ± 0.4) %	S=2.7
$\Gamma_4 2\pi^+2\pi^-$	(2.8 ± 0.4) %	S=1.2
$\Gamma_5 \eta\eta$	(4.0 ± 0.8) $\times 10^{-3}$	S=2.1
$\Gamma_6 4\pi^0$	(3.0 ± 1.0) $\times 10^{-3}$	
$\Gamma_7 \gamma\gamma$	(1.41 ± 0.13) $\times 10^{-5}$	
$\Gamma_8 \eta\pi\pi$	< 8 $\times 10^{-3}$	CL=95%
$\Gamma_9 K^0 K^- \pi^+ + \text{c.c.}$	< 3.4 $\times 10^{-3}$	CL=95%
$\Gamma_{10} e^+e^-$	< 6 $\times 10^{-10}$	CL=90%

CONSTRAINED FIT INFORMATION

An overall fit to the total width, 4 partial widths, a combination of partial widths obtained from integrated cross sections, and 6 branching ratios uses 45 measurements and one constraint to determine 8 parameters. The overall fit has a $\chi^2 = 80.0$ for 38 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta p_i \delta p_j \rangle / (\delta p_i \cdot \delta p_j)$, in percent, from the fit to parameters p_i , including the branching fractions, $x_i \equiv \Gamma_i / \Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_2	-91						
x_3	11	-38					
x_4	10	-37	1				
x_5	1	-6	0	0			
x_6	0	-7	0	0	0		
x_7	10	-7	-9	1	0	0	
Γ	-78	72	-11	-8	-1	0	-14
	x_1	x_2	x_3	x_4	x_5	x_6	x_7

Mode	Rate (MeV)	Scale factor
$\Gamma_1 \pi\pi$	156.9 $^{+3.8}_{-1.2}$	
$\Gamma_2 \pi^+\pi^-2\pi^0$	13.1 $^{+2.7}_{-5.0}$	1.3
$\Gamma_3 K\bar{K}$	8.5 ± 0.8	2.7
$\Gamma_4 2\pi^+2\pi^-$	5.2 ± 0.7	1.2
$\Gamma_5 \eta\eta$	0.74 ± 0.14	2.1

Γ_6	$4\pi^0$	0.55	± 0.18
Γ_7	$\gamma\gamma$	0.00260	± 0.00024

$f_2(1270)$ PARTIAL WIDTHS

$\Gamma(\pi\pi)$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_1
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156.9 $^{+3.8}_{-1.2}$ OUR FIT

157.0 $^{+6.0}_{-1.0}$ 19 LONGACRE 86 MPS $22\pi^- p \rightarrow n2K_S^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

152 ± 8 870 20 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

$\Gamma(K\bar{K})$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_3
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8.5 ± 0.8 OUR FIT Error includes scale factor of 2.7.

9.0 $^{+0.7}_{-0.3}$ 19 LONGACRE 86 MPS $22\pi^- p \rightarrow n2K_S^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

7.5 ± 2.0 870 20 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

$\Gamma(\eta\eta)$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_5
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0.74 ± 0.14 OUR FIT Error includes scale factor of 2.1.

1.0 ± 0.1 19 LONGACRE 86 MPS $22\pi^- p \rightarrow n2K_S^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

1.8 ± 0.4 870 20 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

$\Gamma(\gamma\gamma)$

The value of this width depends on the theoretical model used. Unitarised models with scalars give values clustering around $\simeq 2.6$ keV; without an S-wave contribution, values are systematically higher (typically around 3 keV).

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_7
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2.60 ± 0.24 OUR FIT

2.71 $^{+0.26}_{-0.23}$ OUR AVERAGE

2.84 ± 0.35 BOGLIONE 99 RVUE $\gamma\gamma \rightarrow \pi^+\pi^-, \pi^0\pi^0$

2.58 ± 0.13 $^{+0.36}_{-0.27}$ 21 BEHREND 92 CELL $e^+e^- \rightarrow e^+e^-\pi^+\pi^-$

• • • We do not use the following data for averages, fits, limits, etc. • • •

2.55 ± 0.15 870 20 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

2.93 ± 0.23 ± 0.32 22 YABUKI 95 VNS

3.10 ± 0.35 ± 0.35 23 BLINOV 92 MD1 $e^+e^- \rightarrow e^+e^-\pi^+\pi^-$

2.27 ± 0.47 ± 0.11 ADACHI 90D TOPZ $e^+e^- \rightarrow e^+e^-\pi^+\pi^-$

3.15 ± 0.04 ± 0.39 BOYER 90 MRK2 $e^+e^- \rightarrow e^+e^-\pi^+\pi^-$

3.19 ± 0.16 $^{+0.29}_{-0.28}$ MARSISKE 90 CBAL $e^+e^- \rightarrow e^+e^-\pi^0\pi^0$

2.35 ± 0.65		²⁴ MORGAN	90	RVUE	$\gamma\gamma \rightarrow \pi^+\pi^-, \pi^0\pi^0$
$3.19 \pm 0.09^{+0.22}_{-0.38}$	2177	OEST	90	JADE	$e^+e^- \rightarrow e^+e^-\pi^0\pi^0$
$3.2 \pm 0.1 \pm 0.4$		²⁵ AIHARA	86B	TPC	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
$2.5 \pm 0.1 \pm 0.5$		BEHREND	84B	CELL	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
$2.85 \pm 0.25 \pm 0.5$		²⁶ BERGER	84	PLUT	$e^+e^- \rightarrow e^+e^-2\pi$
$2.70 \pm 0.05 \pm 0.20$		COURAU	84	DLCO	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
$2.52 \pm 0.13 \pm 0.38$		²⁷ SMITH	84C	MRK2	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
$2.7 \pm 0.2 \pm 0.6$		EDWARDS	82F	CBAL	$e^+e^- \rightarrow e^+e^-2\pi^0$
$2.9^{+0.6}_{-0.4} \pm 0.6$		²⁸ EDWARDS	82F	CBAL	$e^+e^- \rightarrow e^+e^-2\pi^0$
$3.2 \pm 0.2 \pm 0.6$		BRANDELIK	81B	TASS	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
$3.6 \pm 0.3 \pm 0.5$		ROUSSARIE	81	MRK2	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$
2.3 ± 0.8		²⁹ BERGER	80B	PLUT	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-$

$\Gamma(e^+e^-)$

Γ_{10}

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
<0.11	90	ACHASOV	00K	$e^+e^- \rightarrow \pi^0\pi^0$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<1.7 90 VOROBIEV 88 ND $e^+e^- \rightarrow \pi^0\pi^0$

¹⁹ From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

²⁰ From analysis of L3 data at 91 and 183–209 GeV and using SU(3) relations.

²¹ Using a unitarized model with a 300 – 500 keV wide scalar at 1100 MeV.

²² With a narrow scalar state around 1220 MeV.

²³ Using the unitarized model of LYTH 85.

²⁴ Error includes spread of different solutions. Data of MARK2 and CRYSTAL BALL used in the analysis. Authors report strong correlations with $\gamma\gamma$ width of $f_0(1370)$: $\Gamma(f_2) + 1/4\Gamma(f^0) = 3.6 \pm 0.3$ KeV.

²⁵ Radiative corrections modify the partial widths; for instance the COURAU 84 value becomes 2.66 ± 0.21 in the calculation of LANDRO 86.

²⁶ Using the MENNESSIER 83 model.

²⁷ Superseded by BOYER 90.

²⁸ If helicity = 2 assumption is not made.

²⁹ Using mass, width and $B(f_2(1270) \rightarrow 2\pi)$ from PDG 78.

$f_2(1270)\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma_3\Gamma_7/\Gamma$

VALUE (keV)	DOCUMENT ID	TECN	COMMENT
0.120 ± 0.014 OUR FIT	Error includes scale factor of 1.3.		

0.091 ± 0.007 ± 0.027 30 ALBRECHT 90G ARG $e^+e^- \rightarrow e^+e^-K^+K^-$

• • • We do not use the following data for averages, fits, limits, etc. • • •

0.104 ± 0.007 ± 0.072 31 ALBRECHT 90G ARG $e^+e^- \rightarrow e^+e^-K^+K^-$

³⁰ Using an incoherent background.

³¹ Using a coherent background.

$f_2(1270)$ BRANCHING RATIOS **$\Gamma(\pi\pi)/\Gamma_{\text{total}}$**

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
0.848^{+0.024}_{-0.012} OUR FIT				Error includes scale factor of 1.2.	
0.837^{+0.020}_{-0.020} OUR AVERAGE					
0.849 \pm 0.025		CHABAUD	83	ASPK	17 $\pi^- p$ polarized
0.85 \pm 0.05	250	BEAUPRE	71	HBC	8 $\pi^+ p \rightarrow \Delta^{++} f_2$
0.8 \pm 0.04	600	OH	70	HBC	1.26 $\pi^- p \rightarrow \pi^+ \pi^- n$

 $\Gamma(\pi^+\pi^-2\pi^0)/\Gamma(\pi\pi)$ **Γ_2/Γ_1** Should be twice $\Gamma(2\pi^+ 2\pi^-)/\Gamma(\pi\pi)$ if decay is $\rho\rho$. (See ASCOLI 68D.)

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ_1
0.083^{+0.018}_{-0.033} OUR FIT				Error includes scale factor of 1.3.	
0.15 \pm0.06	600	EISENBERG	74	HBC	4.9 $\pi^+ p \rightarrow \Delta^{++} f_2$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.07		EMMS	75D	DBC	4 $\pi^+ n \rightarrow pf_2$

 $\Gamma(K\bar{K})/\Gamma(\pi\pi)$ **Γ_3/Γ_1** We average only experiments which either take into account $f_2(1270)$ - $a_2(1320)$ interference explicitly or demonstrate that $a_2(1320)$ production is negligible.

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_3/Γ_1
0.054^{+0.005}_{-0.006} OUR FIT				Error includes scale factor of 2.7.	
0.041^{+0.004}_{-0.005} OUR AVERAGE					
0.045 \pm 0.01		32 BARGIOTTI	03	OBLX	$\bar{p}p$
0.037 ^{+0.008} _{-0.021}		ETKIN	82B	MPS	23 $\pi^- p \rightarrow n2K_S^0$
0.045 \pm 0.009		CHABAUD	81	ASPK	17 $\pi^- p$ polarized
0.039 \pm 0.008		LOVERRE	80	HBC	4 $\pi^- p \rightarrow K\bar{K}N$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.052 \pm 0.025		ABLIKIM	04E	BES2	$J/\psi \rightarrow \omega K^+ K^-$
0.036 \pm 0.005		33 COSTA...	80	OMEG	1-2.2 $\pi^- p \rightarrow K^+ K^- n$
0.030 \pm 0.005		34 MARTIN	79	RVUE	
0.027 \pm 0.009		35 POLYCHRO...	79	STRC	7 $\pi^- p \rightarrow n2K_S^0$
0.025 \pm 0.015		EMMS	75D	DBC	4 $\pi^+ n \rightarrow pf_2$
0.031 \pm 0.012	20	ADERHOLZ	69	HBC	8 $\pi^+ p \rightarrow K^+ K^- \pi^+ p$

 $\Gamma(2\pi^+ 2\pi^-)/\Gamma(\pi\pi)$ **Γ_4/Γ_1**

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_4/Γ_1
0.033^{+0.005}_{-0.005} OUR FIT				Error includes scale factor of 1.2.	
0.033^{+0.004}_{-0.004} OUR AVERAGE				Error includes scale factor of 1.1.	
0.024 \pm 0.006	160	EMMS	75D	DBC	4 $\pi^+ n \rightarrow pf_2$
0.051 \pm 0.025	70	EISENBERG	74	HBC	4.9 $\pi^+ p \rightarrow \Delta^{++} f_2$
0.043 ^{+0.007} _{-0.011}	285	LOUIE	74	HBC	3.9 $\pi^- p \rightarrow nf_2$
0.037 \pm 0.007	154	ANDERSON	73	DBC	6 $\pi^+ n \rightarrow pf_2$
0.047 \pm 0.013		OH	70	HBC	1.26 $\pi^- p \rightarrow \pi^+ \pi^- n$

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$

<u>VALUE</u> (units 10^{-3})	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_5/Γ
4.0±0.8 OUR FIT Error includes scale factor of 2.1.				
2.9±0.5 OUR AVERAGE				
2.7±0.7	BINON	05	GAMS 33 $\pi^- p \rightarrow \eta\eta n$	
2.8±0.7	ALDE	86D	GAM4 100 $\pi^- p \rightarrow 2\eta n$	
5.2±1.7	BINON	83	GAM2 38 $\pi^- p \rightarrow 2\eta n$	

$\Gamma(\eta\eta)/\Gamma(\pi\pi)$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_5/Γ_1
0.003±0.001		BARBERIS	00E	450 $p p \rightarrow p_f \eta\eta p_s$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.05	95	EDWARDS	82F	CBAL $e^+ e^- \rightarrow e^+ e^- 2\eta$	
<0.016	95	EMMS	75D	DBC 4 $\pi^+ n \rightarrow p f_2$	
<0.09	95	EISENBERG	74	HBC 4.9 $\pi^+ p \rightarrow \Delta^{++} f_2$	

$\Gamma(4\pi^0)/\Gamma_{\text{total}}$

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_6/Γ
0.0030±0.0010 OUR FIT					
0.003 ±0.001	400 ± 50	ALDE	87	GAM4 100 $\pi^- p \rightarrow 4\pi^0 n$	

$\Gamma(\eta\pi\pi)/\Gamma(\pi\pi)$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_8/Γ_1
<0.010	95	EMMS	75D	DBC 4 $\pi^+ n \rightarrow p f_2$	

$\Gamma(K^0 K^- \pi^+ + \text{c.c.})/\Gamma(\pi\pi)$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_9/Γ_1
<0.004	95	EMMS	75D	DBC 4 $\pi^+ n \rightarrow p f_2$	

$\Gamma(e^+ e^-)/\Gamma_{\text{total}}$

<u>VALUE</u> (units 10^{-10})	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_{10}/Γ
<6	90	ACHASOV	00K	SND $e^+ e^- \rightarrow \pi^0 \pi^0$	
32 Coupled channel analysis of $\pi^+ \pi^- \pi^0$, $K^+ K^- \pi^0$, and $K^\pm K_S^0 \pi^\mp$.					
33 Re-evaluated by CHABAUD 83.					
34 Includes PAWLICKI 77 data.					
35 Takes into account the $f_2(1270)-f'_2(1525)$ interference.					

$f_2(1270)$ REFERENCES

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BOGLIONE	99	EPJ C9 11	M. Boglione, M.R. Pennington	
ALDE	98	EPJ A3 361	D. Alde <i>et al.</i>	(GAM4 Collab.)
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MORGAN	90	ZPHY C48 623	D. Morgan, M.R. Pennington	(RAL, DURH)
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AUGUSTIN	89	NP B320 1	J.E. Augustin, G. Cosme	(DM2 Collab.)
VOROBYEV	88	SJNP 48 273	P.V. Vorobiev <i>et al.</i>	(NOVO)
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ALDE	87	PL B198 286	D.M. Alde <i>et al.</i>	(LANL, BRUX, SERP, LAPP)
AUGUSTIN	87	ZPHY C36 369	J.E. Augustin <i>et al.</i>	(LALO, CLER, FRAS+)
ABACHI	86B	PRL 57 1990	S. Abachi <i>et al.</i>	(PURD, ANL, IND, MICH+)
AIHARA	86B	PRL 57 404	H. Aihara <i>et al.</i>	(TPC-2 γ Collab.)
ALDE	86D	NP B269 485	D.M. Alde <i>et al.</i>	(BELG, LAPP, SERP, CERN+)
LANDRO	86	PL B172 445	M. Landro, K.J. Mork, H.A. Olsen	(UTRO)
LONGACRE	86	PL B177 223	R.S. Longacre <i>et al.</i>	(BNL, BRAN, CUNY+)
LYTH	85	JPG 11 459	D.H. Lyth	
BEHREND	84B	ZPHY C23 223	H.J. Behrend <i>et al.</i>	(CELLO Collab.)
BERGER	84	ZPHY C26 199	C. Berger <i>et al.</i>	(PLUTO Collab.)
COURAU	84	PL 147B 227	A. Courau <i>et al.</i>	(CIT, SLAC)
SMITH	84C	PR D30 851	J.R. Smith <i>et al.</i>	(SLAC, LBL, HARV)
BINON	83	NC 78A 313	F.G. Binon <i>et al.</i>	(BELG, LAPP, SERP+)
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CHABAUD	83	NP B223 1	V. Chabaud <i>et al.</i>	(CERN, CRAC, MPIM)
DENNEY	83	PR D28 2726	D.L. Denney <i>et al.</i>	(IOWA, MICH)
MENNESSIER	83	ZPHY C16 241	G. Mennessier	(MONP)
APEL	82	NP B201 197	W.D. Apel <i>et al.</i>	(KARLK, KARLE, PISA, SERP+)
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GIDAL	81	PL 107B 153	G. Gidal <i>et al.</i>	(SLAC, LBL)
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LOVERRE	80	ZPHY C6 187	P.F. Loverre <i>et al.</i>	(CERN, CDEF, MADR+)
CORDEN	79	NP B157 250	M.J. Corden <i>et al.</i>	(BIRM, RHEL, TELA+)
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PDG	78	PL 75B 1	C. Bricman <i>et al.</i>	
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APEL	75	PL 57B 398	W.D. Apel <i>et al.</i>	(KARLK, KARLE, PISA, SERP+)
EMMS	75D	NP B96 155	M.J. Emms <i>et al.</i>	(BIRM, DURH, RHEL)
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ARMENISE	70	LNC 4 199	N. Armenise <i>et al.</i>	(BARI, BGNA, FIRZ)
OH	70	PR D1 2494	B.Y. Oh <i>et al.</i>	(WISC, TNTO) JP
STUNTEBECK	70	PL 32B 391	P.H. Stuntebeck <i>et al.</i>	(NDAM)
ADERHOLZ	69	NP B11 259	M. Aderholz <i>et al.</i>	(AACH3, BERL, CERN+)
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